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A GLAD REVOLUTION

Announcing

A NEW PLANT BREEDING MAGIC IN GLADIOLUS

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APR 27 1951



U. S. Department of Agriculture

The First Inbred Hybrid Glad
The First Inbred Glad Varieties



A spike of Lovely Mary, finest of the small glads.

BYRON L. TROYER

Marion, Ind.
402 E. Christy St.

THE NEW MAGIC OF GLAD BREEDING

Announcing:

Blue Blood (IH) Class 576

Driven Snow (I) Class 200

Blue Eyes (I) Class 371

(IH) designates Inbred Hybrid.

(I) designates Inbred

Blue Blood (IH) is, to the best of my knowledge, the first inbred hybrid, not only of gladiolus but of any vegetatively propagated plant, offered for sale. This includes anything produced from bulbs, corms, rootings or cuttings and can be applied as well to potatoes, dahlias, lilies, fruit trees, roses and other ornamental trees and shrubs.

It is the same magic which now is working wonders with varieties of corn, tomatoes, eggplants, zinnias, hogs, cucumbers, chickens and many other varieties of plants and animals. This is the same process used by W. Atlee Burpee & Co., to produce its most highly advertised varieties of vegetables and flowers on the famous Fordhook breeding farms.



(Virginia Smallwood inbreeding a spike of Orange Gold for me to produce future inbred hybrids)

Sold Out

BLUE BLOOD (IH) CLASS 576
(Inbreds BB1 x BB7)

This has an enormous, slightly-flecked slate blue 6½-inch blossom. It opens 6 or 7 on a tall plant with 18 - 20 buds. The foliage is the huskiest and most vigorous I have ever seen on any glad, which is something the blues are NOT noted for. This illustrates the magic that can be wrought by inbreds in weeding out weakness that are inherent in glads. Through inbred hybrids, by developing resistant inbreds, fusarium disease can be entirely eliminated. Since the industry has waited so long for a truly giant blue, that is healthy, we feel that the \$10 price is ridiculously low. However, it is desired that it be placed within the range of the average bulb buyers so they may become acquainted with the value of inbred hybrids. Bulbs are huge and clean as a pin. Blooms in 80 days.

Bulbs, any size, \$10 each. Bulets \$1 each (limit 3)

DRIVEN SNOW (I) CLASS 200
(Inbred of Queen of Bremen)

Beautiful, extremely tall and healthy small decorative. Almost pure white in color with nice ruffling and flowerheads that will go to 36 inches! Opens 6 to 8 bloom with 4 showing color on a very tough, long willowy stem that never breaks. Good propagator. Open placement, in attractive arrangement on stem. Best description of bloom is that it is a miniature edition of White Christmas. I know lots of words but not the ones to do justice to its beauty. This is the first inbred gladiolus offered to the public. Should have no real show competition in the white and cream classes. Likely to be the tallest glad in your garden.

\$3 each, large or medium bulbs. No bulblets.

BLUE EYES (I) CLASS 371
(Inbred of Blue Beauty)

This is another inbred, with one of the prettiest and most interesting color combinations in glads. A mulberry purple, it has a large blue throat blotch. Open florets, 5 to 6 open, tall and husky plant. Healthy foliage and bulbs. Good propagator. Should prove of value in adding stamina and health to both your blue and purple seedlings. Have a good stock so am placing the price below its real value.

\$1 each, larger or medium bulbs. Bulblets, 10 for \$1

WHAT AN INBRED HYBRID GLAD IS

Inbreeding and hybridizing of the resulting inbreds are processes which are working wonders in plant breeding. This applies to breeding of all types of field and vegetable crops as well as animals and poultry. First applied to corn, inbred hybrids were considered a curiosity in 1932. Today, they account for 80 per cent of the entire U. S. corn crop.

This is despite the fact that the farmer has to pay in the neighborhood of \$10 to \$12 per bushel for seed which he formerly could have for free from his own fields.

Corn production just after the end of World War II was 300,000,000 bushels greater in the United States than in 1932, but this was raised on 23,000,000 acres less land. The extra yields resulting from hybrid corn during the World War II years alone were valued at two billion dollars, the cost of an A-bomb project, according to Alton L. Blakeslee, Associated Press science reporter!

Other inbred hybrids are being produced in other fields, with astonishing results. Inbreeding provides a process whereby the weak recessive traits of a plant or animal can be weeded out. Practically absolutely accurate control of the resulting hybrid, when two inbreds are crossed, can be obtained through the wonderful uniformity brought about by inbreeding.

A sixth generation inbred will breed 98 per cent true for any one characteristic, such as color, height of plant, resistance to disease, drought resistance, etc. A first generation inbred will breed 50 per cent true for these characteristics. Compare that with the results you have had in hybridizing our present glads with their mixed-up parentages!

It so happened that I was a boy working for my father when he produced the first commercial hybrid corn seed crop grown in Indiana about 1927. Professors R. R. St. John and John F. Trost, of Purdue University, taught my brother, Eugene, and myself the technique of inbreeding and completing the crosses to make inbred hybrids.

Mr. St. John is now head plant breeder for the DeKalb Agricultural Association, which produces in the neighborhood of \$30,000,000 worth of hybrid seed corn yearly as well as millions of dollars worth of hybrid chickens. Mr. Trost is head plant breeder for the Farmcraft company, another large producer of hybrid seed corn.

In succeeding years, college professors and other plant breeders have branched into many other fields with inbreeding, always with the same astonishing results. Henry Wallace, who was one of the earliest developers of hybrid corn, left office as vice president of the United States to develop hybrid chickens, which are now revolutionizing the poultry industry. Agricultural colleges have developed many inbred strains of swine, which are doing the same for the hog industry.

Many others have worked on various types of vegetables and flowers, with W. Atlee Burpee & Co. pioneering the work on their famous Fordhook breeding farms. As a result, we now have inbred hybrid tomatoes, sweet corn, eggplant, cucumbers, zinnias and sweet peas that have no competitors among the older varieties.

I conceived the idea in 1942 that inbred hybrids could be produced in gladiolus and all other vegetatively propagated plants as well. That year, I started inbreeding, with Pfizer's Blue Beauty. Good blues, then and still, were scarce. I knew that the Pfizer family in Germany had linebred scientifically for half a century. Thus, I presumed Blue Beauty had a purer and healthier background than most of the blues. Blooming of the resulting inbreds brought out the interesting fact that apparently 90 per cent of the blood of Blue Beauty is purple. However, I did get a few blue inbreds with health in both bulbs and foliage.

Inbreeding, I should explain, is done by placing pollen of a flower on the stigma of the same flower, thus crossing it with itself. A detailed explanation of the results would be too long for the space available. Generally speaking, however, it results in sorting out the characteristics of all the ancestors of the particular flower, in accordance with Mendel's laws of segregation and recombination. This sorting permits the discarding of inbreds which exhibit the weaknesses of the ancestors and intensifying the good qualities in other inbreds so their hereditary value is far superior to the original flower.

Crossing of two of the Blue Beauty inbreds (BB1 x BB7) resulted in the inbred hybrid (F1 cross) Blue Blood, which has a mammoth slate blue bloom and the healthiest, largest, most vigorous foliage of any glad I have ever seen. This, I am introducing this year.

While the magic of inbreeding is shown best by crossing two inbreds to gain the vigor which results from combining them, several of my inbreds have shown themselves to be superior to the parents themselves and I'm anxiously awaiting results when bloom is produced from crossing them. Driven Snow (I) is an example. An inbred of the old familiar Queen of Bremen, which I selected because of its healthiness and fast propagation as well as the beautiful color, the inbred came a pure white, with beautiful ruffling. In addition to the other fine traits, it makes the tallest plant with the longest flowerhead I have ever seen in the 200 size, which was far from true of the parent.

The inbreds offered for sale here may be crossed with each other or with other inbreds or with a standard variety to produce what is known in geneticist's language as a top cross. In any of these procedures, you will be assured of far more uniform and superior results than with any cross using standard varieties.

Inbred hybrids have proven themselves far superior in other plant breeding fields. You may be confident that they will in gladiolus too. Not only that, the technique is adaptable to any vegetatively-propagated plant also, such as lilies, dahlias, fruit and other trees and shrubs, potatoes, etc. It undoubtedly will revolutionize these fields, too, as soon as plant breeders get around to them. The cross breeds true from bulbs. So, the cross does not have to be repeated annually as in corn and other seed-bearing plants.

For the coming GLAD REVOLUTION, get inbreds to do your hybridizing with.



EARLIER INTRODUCTIONS

(Fine new small decoratives)

LOVELY MARY — 232 — (1950)

"In 1949, with the driest year in 40 years, only four inches of rain falling in the growing season, I grew two dozen small seedlings from leading originators and an equal number of recent introductions. Your seedling (BUL-1) Lovely Mary, was the only one I bothered to score after Aug. 1, because of drought conditions which affected others. Lovely Mary bloomed Aug. 16 and scored 81, which I considered excellent under the circumstances." — Wesley F. Patience, Millville, N. J.

"LOVELY MARY, this and nearly 100 more 100 and 200 class varieties . . . Catalogue listing some 300 varieties . . ." — W. H. Rogers, Greenlawn, L. I., N. Y., adv. in Dec., 1949, NAGC Bulletin.

"Best bet for 1950," Lovely Mary was one of only two small varieties listed as such by C. T. Larus, in March, 1950, NAGC Bulletin.

"Excellent . . . Truly Lovely . . . This was a standout in my seedling trial ground and I recommend it unhesitatingly . . ." — Glen L. Pierce, Villa Park, Ill., in Dec., 1950, NAGC Bulletin and his catalog. Incidentally, Nadia which is in the same color class and has won more firsts and championships in the last 10 years than any other small glad was rated "good" in the same article.

This warm glowing salmon with cream throat will produce 100 per cent championship spikes from large bulbs, with reasonable good growing conditions and no irrigation. It will produce the tallest spikes on the show table, 300 size class as well as 200. Grand champion small glad at 1947 Indiana State Show; RI small champion at 1950 Columbus, Ind., regional. Health best. Fine propagator. Makes fine spikes in extreme drought. Never crooks. Blooms 75-80 days.

L—\$2.50 M—\$2.00 S—\$1.50 bbs—10—\$2.00

GOLDEN STAIRS — 212 — (1950)

Fine, late, deep golden yellow, opening to 10 on long flowerheads. Slow propagator.

2.50 2.00 1.50 bbts — 5 — 1.50 (limit 5)

TANGELO — 222 — (1947)

Intense deep orange, with cream throat. A tiny champion all the way, with long flowerheads and opening to 8. Shown 22 times since 1946 at Indiana, Ohio and Illinois shows. Won 20 firsts, 4 section champs and 1 small champion of entire show.

.60 .40 .30 bbts—10—.75
Planting stock 10 L 10 M 10 S 100 bbts for \$16.00

ROSY ELF — 263 — (1950)

Deep rose with lavender-washed white blotch in throat. Tall, ruffled and very attractive. Healthy and propagates good. Blooms in 65 days. Regular show winner in a tough class.

.75 .50 .30 bbts 10 — .75

TINY TIM — 206 — (1947)

Tall cream, washed with lavender blush. Healthy and good propagator and a lot of people like this one. Very early.

.50 .35 .25 bbts — 10 — .50 or 100 — \$4.00

ANGEL OF MERCY — 306 — (1947)

Creamy white, with violet spears. Opens up to 10 with 6 showing color. Always straight and never wilts in extreme heat. Cuts 100 per cent. Here is your commercial white. Blooms in 75 days.

.75 .50 .30 bbts 10 — .75 or 100 — \$6.00

ORDER SHEET

BYRON TROYER

402 EAST CHRISTY ST.

MARION, INDIANA

Ship to _____ Date _____

Please Print Name and Address Plainly

Street & No. or R. F. D. _____ Ship When? _____

Post Office _____ State _____

Express Office _____ Ship via express () Parcel Post ()

If Different from Post Office

If I am out of what you order, shall I () Refund Sub () Nearest Size () Similar Color

Please Check

[illegible]

WHOLESALE

(Priced per 100. 25 at same rate)

	L	M	S	bbts.
Lovely Mary	\$160	\$120	\$80	100—\$8.00
Angel of Mercy	48	32	19	100— 4.00
Bittersweet	9.60	7.60	6.40	100— .50 1000— 4.00
Tiny Tim	25	15	10	100— 1.00

MINNY MIX

(Best of small varieties, including such winners as Tiny Tim, Queen of Bremen, Will's Scarlet, Sub Deb, Tweedledum, etc.)

\$5.00 per 100 large. \$2.60 for 50.

LARGE MIXTURE

(Such fine standards as Burma, Leading Lady, Bittersweet, Chamouny, etc. No old, inferior varieties here.)

\$5.00 per 100 large. \$2.60 for 50.

BARGAIN OFFER

One large bulb each of my varieties, Lovely Mary, Tangelo, Angel of Mercy, Tiny Tim, Rosy Elf and Blue Eyes, packed separately and labeled. Retail value, \$6.10, all for \$4.50.

BARGAIN NO. 2

One medium bulb each of Tangelo, Angel of Mercy, Tiny Tim, Rosy Elf, and Blue Eyes. Retail value, \$2.75. All for \$1.75.

TERMS: Cash with order. Postage extra on orders under \$3.00. Will supply liberal extras. Stock state inspected and you will find it clean. ORDER EARLY.



Lovely Mary

